(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 13 January 2005 (13.01.2005)

PCT

(10) International Publication Number WO 2005/002324 A3

- (51) International Patent Classification7: A01H 1/02, 1/06, 5/00, 5/10, C12N 15/11, C12Q 1/68
- (21) International Application Number:

PCT/IB2004/002491

(22) International Filing Date:

5 July 2004 (05.07.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

4 July 2003 (04.07.2003) EP 8 December 2003 (08.12.2003) EP

03291677.7 03293057.0

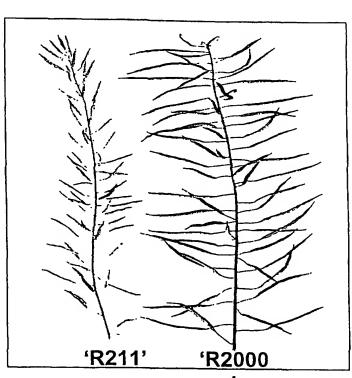
ll designated States except US):

(71) Applicant (for all designated States except US): INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE [FR/FR]; 145, rue de l'Université, F-75007 Paris (FR).

- (72) Inventors; and
- (75) Inventors/Applicants (for US only): PRIMAR-BRIS-SET, Catherine [FR/FR]; 119, rue de Paris, F-78470 Saint Remy les Chevreuse (FR). DELOURME, Régine [FR/FR]; 36, rue de Rennes, F-35590 L'Hermittage (FR). HORVAIS, Raymonde [FR/FR]; La Poterie, Dinge, F-35440 Montreuil-sur-Ille (FR). BUDAR, Françoise [FR/FR]; 52, rue de Gometz, F-91470 Les Molières (FR). PELLETIER, Georges [FR/FR]; 28, avenue de L'Espérance, F-91440 Bures sur Yvette (FR). RENARD, Michel [FR/FR]; 9, avenue du Stade, F-35650 Le Rheu (FR).
- (74) Agents: MARTIN, Jean-Jacques et al.; Cabinet Regimbeau, 20, rue de Chazelles, F-75847 Paris Cedex 17 (FR).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,

[Continued on next page]

(54) Title: METHOD OF PRODUCING DOUBLE LOW RESTORER LINES OF BRASSICA NAPUS HAVING A GOOD AGRONOMIC VALUE



Seed set on 'R211' and 'R2000'

(57) Abstract: A method of producing double low restorer line of Brassica napus for Ogura cytoplasmic male sterility (cms) presenting radish introgression carrying the Rfo restorer gene deleted of the radish Pgi-2 allele and recombined with the Pgi-2 gene from Brassica oleracea, and having a good agronomic value characterized by female fertility, a good transmission rate of Rfo and a high vegetative vigour. A method of forming Brassica napus hybrid seeds and progeny thereof. The seeds of Brassica napus and use of the combined markers PGIol, PGIunt, PGIint, BolJon and CP418 for characterising.



KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 17 February 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.